Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A gyroscope comprising at least one mass capable of vibrating along an x axis at a resonant excitation frequency F_x and capable of vibrating along [[a y]] axis perpendicular to the x axis, at a resonant detection frequency F_y, under the effect of the Coriolis force generated by a rotation about a z axis perpendicular to the x and y axes, comprising connected to the mass, a signal generator for generating a signal that disturbs the vibration of the mass along the y -axis, and a feedback control loop for controlling the resonant frequency F_y so that F_y is equal or practically equal to F_x throughout the duration of use of the gyroscope, the feedback control loop comprising:

means for modifying the resonant detection frequency F_y;

means for detecting the variation induced by the disturbing signal on the vibration of the mass along the y -axis, an error signal e representative of the difference between F_x and F_y being deduced from [[this]] the variation induced by the disturbing signal; and

control means for controlling the F_y-modifying means, the control being established on the basis of the error signal e.

2. (previously presented): The gyroscope as claimed in claim 1, wherein the disturbing-signal generator is connected to the mass via the F_y-modifying means.

3. (previously presented): The gyroscope as claimed in claim 1, wherein the disturbing-signal generator is connected to the F_y-modifying means via the feedback control loop.

4. (previously presented): The gyroscope as claimed in claim 2 wherein the disturbing-signal generator is an oscillator of predetermined reference frequency F_0.

5. (previously presented): The gyroscope as claimed in claim 2, wherein, since the gyroscope has a predetermined bandwidth, the disturbing signal is a periodic signal of frequency F_0, where F_0 is above the bandwidth of the gyroscope but below F_x.

6. (currently amended): The gyroscope as claimed in claim 1, comprising: excitation means for exciting the mass along the y-axis, with the aim of counterbalancing the vibration along the y-axis generated by the Coriolis force, wherein the disturbing-signal generator is connected to the mass via [[these]] the excitation means.

7. (currently amended): The gyroscope as claimed in claim [[1]] 6, comprising: [[a]] the y-axis excitation loop and wherein the disturbing-signal generator is connected to the excitation means via the y-axis excitation loop.

8. (previously presented): The gyroscope as claimed in claim 6, wherein the disturbing-signal generator is a voltage-controlled oscillator.

9. (currently amended): The gyroscope as claimed in claim 6, wherein, since the gyroscope has a predetermined bandwidth, the disturbing signal is a periodic signal, ΔF being equal to about 10% of F_x, the frequency of which varies between $F_x - \Delta F$ and $F_x + \Delta F$ according to a frequency F_0, where F_0 is above the bandwidth of the gyroscope but below F_x ~~, ΔF being equal to about 10% of F_x~~.

10. (previously presented): The gyroscope as claimed in claim 6, wherein the excitation means comprise electrodes.

11. (currently amended): The gyroscope as claimed in claim [[1]] 4, wherein the feedback control loop further comprises:

connected in series, means for shaping the signal output by the detection means, an amplitude detection device, an F_0-centered band-pass filter, a synchronous demodulator for synchronizing with the reference frequency F_0, and an integrator/corrector that is connected to the means for modifying the frequency F_y.

12. (previously presented): The gyroscope as claimed in claim 1, wherein, since the mass is connected to a rigid frame by means of springs along x and y, of respective stiffness K_x and K_y, the means for modifying the resonant frequency F_y comprise electrodes for controlling the stiffness K_y.

13. (currently amended): The gyroscope as claimed in claim 1, wherein the means for detecting the variation induced in the vibration of the mass along the y-axes comprise electrodes.

14. (previously presented): The gyroscope as claimed in claim 1, wherein, when the disturbing signal is a periodic signal of predetermined frequency F_0, the disturbing signal is a sinusoidal or triangular signal.

15. (previously presented): The gyroscope as claimed in claim 1, wherein the gyroscope is a micromachined gyroscope having a plane structure and in that the x and y axes lie in the plane of the plane structure.

16. (previously presented): The gyroscope as claimed in claim 1, wherein the gyroscope is a micromachined gyroscope having a plane structure and in that the x axis lies in the plane of the plane structure and the y axis does not lie in the plane of the plane structure.

17. (previously presented): The gyroscope as claimed in claim 1, wherein the gyroscope has a three-dimensional structure.